AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A process for preparing mechanical pulp, comprising

– chipping the raw wood material,

– pre-treating the chips with an enzyme that is capable of disintegrating the structural parts of the wood, after which

– mechanical pulp is prepared from the chips by refining,

~~characterized in that~~wherein

– the enzymatic treatment is carried out by compressing the chips and bringing the compressed chips in a liquid phase into contact with an enzyme preparation containing ~~an effective amount of both~~ cellobiohydrolase and endoglucanase in a weight ratio of 20:1 - 1:20.

2. (canceled).

3. (currently amended): The process~~A method~~ according to Claim 1, ~~characterized in that~~wherein an enzyme preparation is used, containing cellobiohydrolases and endoglucanases in a weight ratio of the proteins of 5:1 – 1:5~~, preferably in a weight ratio of 3:1 – 1:3~~.

4. (currently amended): The process~~A method~~ according to ~~claim~~Claim 1, ~~characterized in that~~wherein an enzyme preparation is used, containing 2 – 60% by weight~~, preferably 20 – 55% by weight~~ of endoglucanases.

5. (currently amended): The process~~A method~~ according to ~~claim~~Claim 1, ~~characterized in that~~wherein the enzyme preparation is produced by ~~any~~a production strain selected from the group consisting of bacteria, fungi and molds ~~that is used industrially~~.

6. (currently amended): The process~~A method~~ according to ~~claim~~Claim 1, ~~characterized in that~~wherein the enzyme preparation is produced by a strain belonging to a family that is selected from the following group: *Trichoderma*, *Aspergillus*, *Penicillium*, *Humicola*, *Phanerochaete*, *Streptomyces*, and *Bacillus*.

7. (currently amended): The process~~A method~~ according to ~~claim~~Claim 1, ~~characterized in that~~wherein the enzyme preparation is used in an amount of 0.1 – 7mg of protein per g of chips~~, preferably 3 – 6mg of protein per g of chips~~ (dry matter).

8. (currently amended): The process~~A method~~ according to ~~claim~~Claim 1, ~~characterized in that~~wherein the pulp is refined to obtain a drainability of at least 100 m1 CSF~~, preferably at least about 80m1 CSF~~.

9. (currently amended): The process~~A method~~ according to ~~claim~~Claim 1, ~~characterized in that~~wherein the chips are compressed by at least 10%.

10. (currently amended): The process~~A method~~ according to Claim 9, ~~characterized in that~~wherein the chips are compressed using a compression ratio of 1:2 — 1:10.

11. (currently amended): The process~~A method~~ according to ~~claim~~Claim 1, ~~characterized in that~~wherein the average chip ~~size~~length of the chips that are subjected to the compression treatment is about 15 — 25 mm.

12. (currently amended): The process~~A method~~ according to ~~claim~~Claim 1, ~~characterized in that~~wherein the compression treatment is carried out in a screw clamp or a hydraulic press.

13. (currently amended): The process~~A method~~ according to ~~claim~~Claim 1, ~~characterized in that~~wherein the enzyme preparation is allowed to act on the chips for at least 1 minute~~, preferably about 5 — 100 min~~ before the refiner mechanical pulp is prepared.

14. (currently amended): The process~~A method~~ according to ~~claim~~Claim 1, ~~characterized in that~~wherein the chips are steamed before the compression treatment.

15. (currently amended): The process~~A method~~ according to ~~claim~~Claim 1, ~~characterized in that~~wherein the mechanical pulp is prepared by the TMP or the RMP method.

16. (currently amended): The process~~The use of the method~~ according to ~~claim~~Claim 1, wherein the ~~for preparing~~ mechanical pulp ~~that~~ is ~~used for~~subsequently made into paper ~~pulp~~.

17. (currently amended): A method of reducing the energy consumption of mechanical pulping processes that are based on the refinement of chips, ~~characterized in that~~wherein, before refining, the chips are treated with an enzyme preparation, which contains cellobiohydrolase and endoglucanase enzymes in a ratio of 20:1 — 1:20 and which is absorbed into the chips by a mechanical compression of the chips and by bringing the compressed chips into contact with the enzyme preparation in a liquid phase.

18. (currently amended): The ~~A~~ method according to Claim 17, ~~characterized in that~~wherein the chips are refined to obtain a drainability level of < 100 ml CSF~~, preferably < 80ml CSF~~.

19. (new): The method as claimed in Claim 1, wherein an enzyme preparation is used, containing cellobiohydrolases and endoglucanases in a weight ratio of the proteins of 9:1 – 1:9.

20. (new): The method as claimed in Claim 3, wherein an enzyme preparation is used, containing cellobiohydrolases and endoglucanases in a weight ratio of the proteins of 3:1 – 1:3.

21. (new): The method as claimed in Claim 4, wherein an enzyme preparation is used, containing 20 – 55% by weight of endoglucanases.

22. (new): The method as claimed in Claim 7, wherein the enzyme preparation is used in an amount of 3 – 6mg of protein per g of chips (dry matter).

23. (new): The method as claimed in Claim 8, wherein the pulp is refined to obtain a drainability of at least 80 ml CSF.

24. (new): The method as claimed in Claim 13, wherein the enzyme preparation is allowed to act on the chips for 5 — 100 min before the refiner mechanical pulp is prepared.

25. (new): The method as claimed in Claim 18, wherein the chips are refined to obtain a drainability level of < 80 ml CSF.